

PATENT COOPERATION TREATY PCT

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 PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

Applicant's or agent's file reference P 02 111 WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/DK 02/00628	International filing date (day/month/year) 24.09.2002	Priority date (day/month/year) 24.09.2002
International Patent Classification (IPC) or both national classification and IPC A23G3/30		
Applicant GUMLINK AS et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 08.03.2004	Date of completion of this report 08.12.2004
Name and mailing address of the international preliminary examining authority: <div style="display: flex; align-items: center;"> <div> European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 </div> </div>	Authorized Officer Korb, M Telephone No. +49 89 2399-8639 <div style="text-align: right;"> </div>

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/DK 02/00628**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-30 as originally filed

Claims, Numbers

1-41 as originally filed

Drawings, Sheets

1/16-16/16 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-64
	No: Claims	
Inventive step (IS)	Yes: Claims	1-64
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-64
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

- D1: WO 94 11441 A (UNIV GRONINGEN ;GRIJPMA DIRK WYBE (NL); JOZIASSE CONRNELIS AARNOUD) 26 May 1994 (1994-05-26)
- D2: US-A-5 672 367 (GRIJPMA DIRK WYBE ET AL) 30 September 1997 (1997-09-30) cited in the application
- D3: US-B1-6 441 126 (TOMLINSON CHARLES R ET AL) 27 August 2002 (2002-08-27) cited in the application

D1 discloses a rubber-modified synthetic material which homo- or copolymers of cyclic esters comprises copolymers of cyclic esters (cf. p.4, last paragraph and p.5, I.1-5 and p.9-10, example).

D2 (cf. examples 1-4 and claims 1-11) discloses a biodegradable chewing gum comprising as gum base at least one biodegradable polymer selected from the group of polyesters and polycarbonates.

D3 (cf. examples, col.10-12 and claims 1-15) discloses a crosslinked branched aliphatic biodegradable polyester gum base which is obtained by reactive extrusion.

2. As there is no indication of a polymer having a backbone formed by at least two different monomers and further comprising at least one carbohydrate monomer in D1 or D2 or D3, the subject-matter according to claims 1-64 is considered novel over anyone of the said documents (Art. 33(2) PCT).

3. The document D1 is regarded as being the closest prior art to the claimed subject-matter. Starting from D1 the skilled person would know that a polymer may be formed on the basis of cyclic esters and that these polymers may be obtained by means of a polyfunctional initiator. However, the skilled person would find no hints in D1 or D2 and in combination with D3 that at least two different monomers, when paired with a carbonate monomer as defined in the claims, would result in a branched structure of the polymer and that this branched polymer would be suitable for use in chewing gum due to its advantageous elastomeric properties. Hence the subject-matter according to claims 1-64 is considered to involve an inventive step over D1 or D2 and in combination

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with D3 (Art. 33(3) PCT).

4. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor is this document identified therein.

5. The category "E" documents referred to in the International Search Report, i.e. WO 02 076230 and WO 02 076228 and EP-A-1 306 013 (cf. claims) appear to represent pertinent documents with respect to the subject-matter claimed for EURO-PCT.